



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,762	08/21/2003	Franklin F.K. Tong	20229.0013	7289
23517	7590	01/11/2006	EXAMINER	
SWIDLER BERLIN LLP 3000 K STREET, NW BOX IP WASHINGTON, DC 20007			RAHLL, JERRY T	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/644,762	Applicant(s) TONG ET AL.	
	Examiner Jerry T. Rahll	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2 and 4-8 is/are allowed.
- 6) ☒ Claim(s) 9-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 October 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The indicated allowability of claims 11 and 15 is withdrawn upon reconsideration of the prior art. New rejection of the subject matter follows.

#### ***Drawings***

2. The drawings submitted 05 October 2005 have been reviewed and determined to facilitate understanding of the invention. The drawings are accepted as submitted.

#### ***Response to Arguments***

3. Applicant's arguments filed 05 October 2005 have been fully considered but they are not persuasive. The Applicant states that the Examiner has not identified a disclosure of canals formed in a substrate surface. The Examiner directs the Applicant to Paragraph 4 of the Office Action mailed 05 April 2005, where the examiner identified the canals formed in the substrate of Dudek et al. prior art using reference numeral 238.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 9, 12-13 and 16-17 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,767,141 to Dudek et al.

6. Regarding Claim 9, Dudek et al. describes a substrate for mounting optical components (216) including two canals (238) formed in a substrate surface and extending from an edge of the

Art Unit: 2874

substrate for receiving centering pins (84) aligning and connecting the connector body (218) to the substrate (216) (see further Figure 29 and Columns 12-13).

7. Regarding Claim 12, Dudek et al. describes a vertical emitting optical component (12) mounted to the substrate (216) adjacent to the edge for transmitting at least one beam (see Column 12).

8. Regarding Claim 13, Dudek et al. describes a monitoring diode (26) mounted to the substrate adjacent to the edge for monitoring the transmitting of the at least one beam (see Column 12).

9. Regarding Claim 16, Dudek et al. describes an optical assembly having a connector body (86, 218) with two pin bores (98) extending from a first surface (100) to a second surface (96) and an array of bores (88) extending from the first surface (96) to the second surface (100); optical fibers positioned within at least some of the bores (see Column 6 Line 36); a substrate (216) including two canals (238) formed in a substrate surface and extending from an edge of the substrate; centering pins (84) positioned in the pin bores (98) and canals (238) connecting the connector body (218) to the substrate (216); and an active optical component (12, 26) mounted on the substrate (216) engaged in optical communication with at least some of the fibers (see Figures 5, 6 and 29 and Columns 6, 7, 10 and 12).

10. Regarding Claim 17, Dudek et al. describes the assembly having a cover (220) positioned around the substrate (216).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2874

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 10-11 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dudek et al. Dudek et al. describes an optical assembly as discussed above.

13. Regarding Claim 10, Dudek et al. does not specifically describe the active optical component as a horizontal emitting active optical component. However, Dudek et al. does suggest that lasers different than the exemplary VCSEL lasers shown in the preferred embodiment may be used (see Column 2 Lines 45-50). The examiner takes official notice that besides VCSEL lasers, horizontal emitting lasers are the main type of lasers known and used in the art. Therefore, it would have been obvious to one of ordinary skill in the art to follow the suggestion Dudek et al. and use a horizontal emitting laser in place of the VCSELs shown in the described embodiment.

14. Regarding Claim 14, Dudek et al. does not describe an optical component mounted on the substrate for receiving a beam. However, the examiner takes official notice that it is a basic operating principle of optical assemblies that optical paths may operate in either direction, and that an optical detector can be positioned identically in relation to an optical path as an optical emitter to receive an optical beam instead of emit an optical beam, respectively. Therefore, it would have been obvious to one of ordinary skill in the art to use the assembly set up of Dudek et al. to receive an optical beam to an active optical component instead of emitting an optical beam from the VCSELs described as described by Dudek et al.

15. Regarding Claims 11 and 15, Dudek et al. does not specifically describe the use of lens components for focusing the beam. However, it is well-known that VCSELs (12) include lens

Art Unit: 2874

components to focus optical beams. It would have been obvious to one of ordinary skill in the art to use VCSELs having such lens components with the assembly of Dudek et al. The motivation for doing so would have been to reduce coupling losses and allow for closer spacing of the optical components.

***Allowable Subject Matter***

16. Claims 1-2, and 4-8 are allowed.

17. Claims 1-2 and 4-8 describe a pair of cavities extending from a third surface of the body to corresponding pin bores, where each of the cavities is isolated from the array of bores. This is subject matter not described or reasonably suggested, in conjunction with the further limitations of the present claims, by the prior art of record.

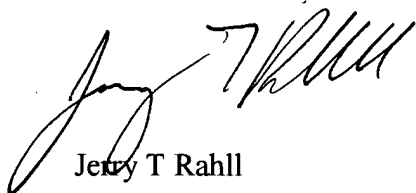
***Conclusion***

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry T. Rahll whose telephone number is (571) 272-2356. The examiner can normally be reached on M-Th (8:30-5:30).

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2874

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jerry T Rahll

*Michelle R. Connelly-Cushwa*  
MICHELLE CONNELLY-CUSHWA  
PRIMARY EXAMINER  
1/8/06